

BR 0105879-7 A

Job No.: 1505-99486

Ref.: BR200105879A

Translated from Portuguese by the Ralph McElroy Translation Company
910 West Avenue, Austin, Texas 78701 USA

FEDERATIVE REPUBLIC OF BRAZIL
MINISTRY OF DEVELOPMENT, INDUSTRY AND EXTERNAL COMMERCE
NATIONAL INSTITUTE OF INDUSTRIAL PROPERTY
NO. 0105879-7 A

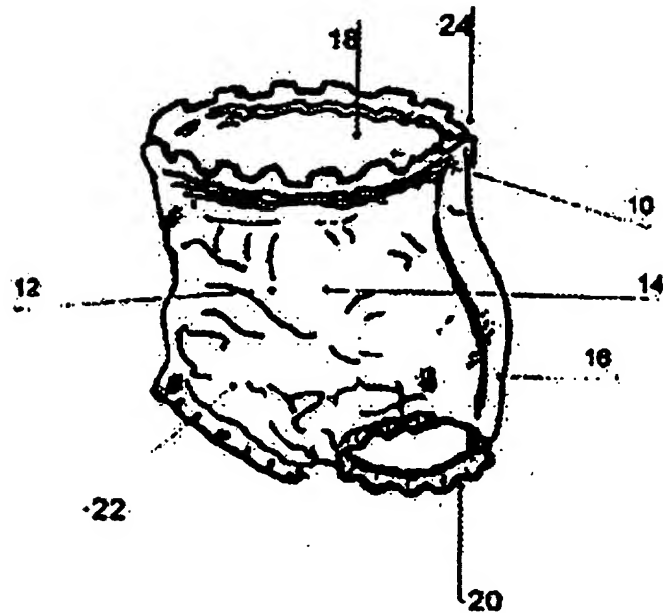
Int. Cl. ⁷ :	A 61 F 13/15
Filing No.:	PI 0105879-7A
Filing Date:	November 14, 2001
Publication Date:	July 2, 2002 (RPI [Registry of Invention Patents] 1643)
Union Priority:	
Date:	November 16, 2000
Country:	MX
No.:	011276

EXTERIOR COVERING OF DISPOSABLE UNDERPANTS FOR SWIMMING BABIES

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Abstract

“Exterior covering of disposable underpants for swimming babies.” Where reference is made to a disposable absorbent article such as disposable underpants for swimming babies, basically composed of an interior layer, an exterior layer and an absorbent matrix located between the two, such that the exterior layer has the capacity to undergo a change on contact with water, such as a change of color or of design or the appearance of some sort of figure attractive to the baby.



The present invention refers to an improvement in disposable underpants for babies that consists of providing an exterior covering on these which impedes the passage of liquids.

The expression "disposable absorbent article" refers to articles that absorb and retain body wastes and that are disposable after use. Generally, disposable absorbent articles consist basically of a top covering which is permeable to liquids, an impermeable exterior covering and an absorbent matrix located between the two. The interior covering is that which is in contact with the skin of the wearer, while the exterior covering, as the name implies, is that which is outside during use. In these types of articles, especially in disposable diapers for babies, training underpants and other types of articles, such as disposable underpants for swimmers, it is desirable for the consumer that the outer covering have the appearance of fabric, for which a lamination of low-density polyethylene with nonwoven fabric is used as the outer covering. Speaking specifically of disposable underpants for swimmers, it is also pleasing to the customer if the exterior covering is colored or has some figure or design that attracts the attention of the baby. This type of article can be found on the market.

Another characteristic that can please the consumer is a change in color or the appearance of some type of figure or design on the outer covering when in contact with the water. The present invention refers to a disposable absorbent article, specifically underpants for swimming babies, the exterior covering of which has the ability to undergo change upon contact with the water, whether a change of color or design, or the appearance of one or more figures that are attractive to the baby.

The patent literature does not include antecedents relevant to the present invention; in particular, they do not refer to the ability to undergo a change in color, design or the appearance of colors and/or designs upon making contact with water.

The objective of the present invention is that of offering the consumer an attractive alternative to disposable underpants for swimming babies which has an exterior covering that has the ability to undergo changes upon contact with water, whether a change of color or of design, or the appearance of a figure that is attractive to a baby.

The present invention will be better understood in light of the designs attached, which are given merely as examples and are not limiting, in which:

Figure 1 shows a pair of disposable underpants for swimming babies with all of its components.

Figure 2 shows a pair of disposable underpants for swimming babies in which a random figure appears after making contact with the water.

Figure 3 shows a pair of disposable underpants for swimming babies of the present invention, with a figure located on its front part.

Upon swimming, babies who still use diapers, that is, from newborn to about 24-30 months, always run the risk that their swimsuits will not retain their wastes, liquid or solid, in an appropriate manner. To solve this problem, some parents make use of disposable diapers. This type of product presents the problem that because its absorbent matrix contains a superabsorbent material, it swells on contact with water, bringing about a notable increase in the volume of the diaper and causing it to become very heavy and uncomfortable for the baby. Because of this, disposable diapers have been developed for babies in recent years which have appropriate characteristics for retaining wastes and not swelling on contact with water, so that the user will feel much more comfortable and free using this type of product for swimming.

A disposable pair of underpants for swimming babies is a disposable absorbent article basically constituted, as can be seen in Figure 1, of a top covering (10) permeable to fluid which is that which is in contact with the skin of the user during use, an exterior impermeable covering (12) and an absorbent matrix (14) located between them, designed specifically to absorb wastes without swelling. All the components are united by well-known conventional means, such as hot-melt adhesive, thermal or ultrasonic wax.

The disposable underpants for swimming babies have a union or bond (16) that unites the waist opening (18) with each one of the leg openings (20) such that it has precisely the form of underpants that can be pulled up and down over the legs. These disposable underpants for swimming babies have a front part (22) and a back part (24).

The impermeable exterior covering (12) of this type of article must be soft and flexible to allow the user's movements; as this exterior covering, a low-density polyethylene can be used, or

a laminate of low-density polyethylene with nonwoven fabric to give the desirable appearance of fabric for the consumer.

Because of the nature of the article, it is usual for this exterior covering (12) to be of bright colors, so that it can be used in place of a swimsuit. This saves the parents the necessity and inconvenient consequences of having to put a swimsuit on over the disposable absorbent article.

The present invention refers to the use of an exterior covering (12) for disposable underpants for swimming babies that undergoes some type of change on contact with water, such as a change in color or design of the entire exterior covering, or the appearance on it of one or more figures.

In an alternative of the present invention shown in Figure 2, disposable underpants for swimming babies are illustrated, the outer covering (12) of which undergoes a change on contact with water, in that some type of figure appears on it, such as stars, fish, circles, or any other type of ornamental figure, randomly placed on its entire surface.

Another alternative of the present invention is the appearance of one or more figures in a localized area of the exterior covering (12), such as its front part (22) and/or back (24), as can be seen in Figure 3.

The figures or designs that appear on the exterior covering on contact with water can be of any form or size, and can be distributed in an overall pattern or randomly placed on the exterior covering of the article.

All of the foregoing is obtained by using different types of ink and/or printing on the polyethylene that can be used as is, forming the exterior covering of the underpants for swimmers, or united to a nonwoven fabric to make the corresponding laminate that will be the exterior covering of the disposable underpants for babies of the present invention. In particular, inks are used that in their dry state are "invisible" to the consumer, but that on making contact with water, are "activated" to appear in plain sight. These inks are known and for this reason, will not be further described here.

Although the present invention has been described in its presently preferred embodiments, it is evident that those skilled in the technology can think of changes or modifications that would remain within the scope and spirit of the present invention, according to what is defined in the attached claims.

Claims

1. Disposable absorbent article, such as disposable underpants for swimming babies that comprises a permeable interior covering, an impermeable exterior covering and an absorbent

matrix located between them, characterized by the fact that the exterior covering undergoes an appreciable change upon contact with water.

2. Disposable absorbent article in accordance with Claim 1, characterized by the fact that the change mentioned is a change in color or design on the entire exterior covering of the article.

3. Disposable absorbent article in accordance with Claim 1, characterized by the fact that the change mentioned is the appearance of some recurring and randomly placed figure on the entire exterior covering of the article.

4. Disposable absorbent article in accordance with Claim 1, characterized by the fact that the change mentioned consists of the appearance of one or more figures placed in certain areas of the disposable underpants for swimming babies.

5. Disposable absorbent article in accordance with Claim 1, characterized by the fact that the change mentioned consists of the appearance of various figures that follow a certain pattern, such as horizontal, vertical, curved lines, etc., on the entire exterior covering of the article.

6. Disposable absorbent article in accordance with any of Claims 1-5, characterized by the fact that the exterior covering is low-density polyethylene.

7. Disposable absorbent article in accordance with any of Claims 1-6, characterized by the fact that the exterior covering is a laminate of low-density polyethylene with nonwoven fabric.

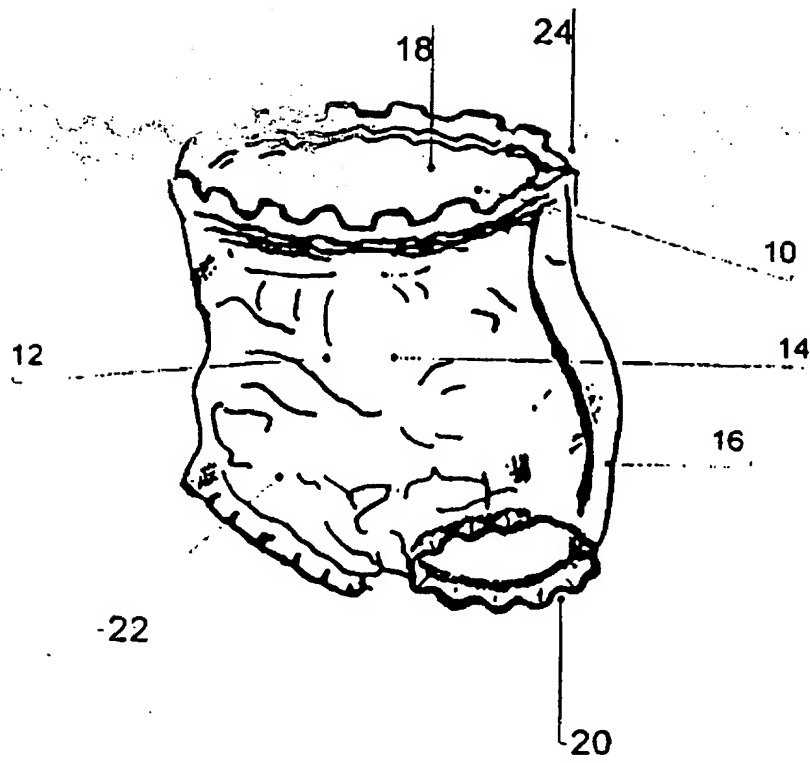


Figure 1

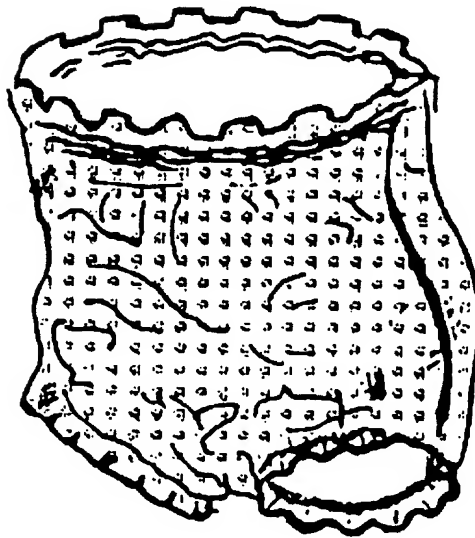


Figure 2

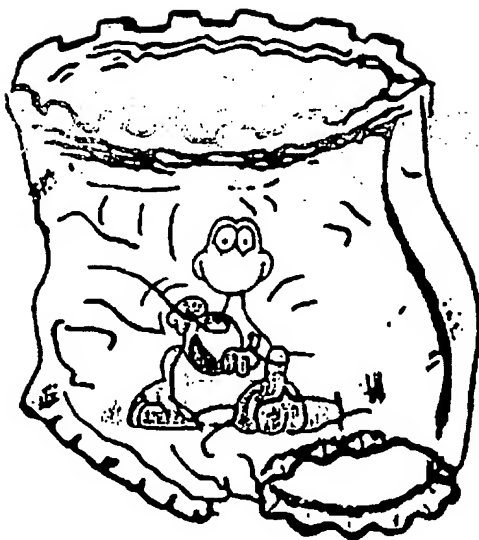


Figure 3

Summary

Exterior covering of disposable underpants for swimming babies, referring to a disposable absorbent article such as disposable underpants for swimming babies, basically composed of an interior layer, an exterior layer and an absorbent matrix located between the two, such that the exterior layer has the capacity to undergo a change upon contact with water, for example, a change of color or of design or the appearance of some sort of figure attractive to the baby.